Scheme 2. Synthesis of Mandelate-based Ligands

Reagents: (i) Me_2SO_4 , NaOH, H_2O , 37%; (ii) MeOH, H^+ ; (ii) MOM-Cl, CH_2Cl_2 , Et_3N (90% 2 steps); (iv) For (R)-3: BH_3 , THF, 82%; For (R)-5: $LiBH_4$, THF, 97%; (v) $MeSO_2Cl$, CH_2Cl_2 , Et_3N ; For (R)-8: 100%; (vi) LiBr, acetone; For (R)-10: 84%; For (R)-11: 78% 2 steps; (vii) $NaSSO_2CH_3$, DMF; For (R)-12: 61%; (viii) TFA, H_2O , 82%.

Fig. 3

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Inventors: Jones, et al.

Title: Green cally Modified Mu

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